

New Species of Eupariini (Coleoptera, Scarabaeidae, Aphodiinae) from Papua - New Guinea

by

Zdzisława STEBNICKA *

With 14 figures

ABSTRACT

Three new species of *Saprosites* Redt. and one species of *Euparia* Lep. et Serv. are described and figured. Additional notes and complementary descriptions for three little known species are included.

The Australian Region is inhabited by the representatives of widely distributed genera of Eupariini, such as *Saprosites* Redt., *Euparia* Lep. et Serv. and *Ataenius* Har., finding the largest number of their living relatives in South America. Within this region, the fauna of Australian, Papuan and New Zealandian Subregions is somewhat differentiated in proportion and details and shows a high level of endemism. In the Papuan Subregion nearly 30 species of Eupariini are found (ENDRÖDI 1951; BALTHASAR 1967; KRIKKEN 1970, *et al.*) and this represents a half of the total number of species recorded so far from all over Australian Region.

The present work is based on the material collected in Papua-New Guinea and in the nearby islands by Dr L. Deharveng and Dr J. D. Bourne (coll. Muséum d'Histoire naturelle, Genève), by Dr W. G. Ullrich (coll. Prof. H. J. Bremer, Düsseldorf) and by Dr J. Balogh (coll. Hungarian Natural History Museum, Budapest). The type-specimens and the remaining individuals are deposited in the collections mentioned above and in the Institute of Systematic and Experimental Zoology (ISEZ), Polish Academy of Sciences, Kraków.

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* Institute of Systematic and Experimental Zoology, Polish Academy of Sciences, Sławkowska 17, 31-016 Kraków, Poland.

Saprosites ullrichi n. sp. (Figs. 1-2)

Holotype male: Papua-New Guinea, Eastern Highland Prov., Onerunka, vicinity of Kainantu, 12.IX.1979, W. G. Ullrich (coll. H. J. Bremer).

Paratypes (13): the same locality as holotype, IV; 14, 25, 29. V; 18. VIII; 21. IX; XI. 1979, W. G. Ullrich (coll. H. J. Bremer; Museum Genève; ISEZ).

Length 3.2-3.8 mm, greatest width of pronotum 1.1-1.2 mm, of elytra 1.2-1.3 mm. Body shining, elongate, glabrous, basic color black or dark castaneous, anterior of head and legs dark rufo-ferruginous. Head convex, broad, approximately twice wider than long, clypeal margin finely reflexed, rounded each side of shallow, slightly grooved median emargination, genae very small, right-angled; anterior of head alutaceous, minutely punctate, median and occipital area with fine, evenly distributed punctures. Pronotum convex, rectangular, sides without foveae; anterior angles obtuse, sides straight toward slightly truncate, not emarginate posterior angles; sides, posterior angles and base distinctly bordered, basal border medially less distinctly marked or narrowly broken, slightly crenulate by fine punctures; surface with mixed very fine and larger, unequally distributed punctures separated by one to three their diameters, sides finely, evenly punctate. Scutellum shining, impunctate. Elytra subparallel-sided, faintly widened before apex, humeri finely dentate, striae deeply impressed with subequidistant, rather large punctures distinctly crenating inner margins of the intervals; intervals wider than striae, convex, with very minute, scarcely distributed punctures visible under high magnification. Mesosternum as convex as metasternum, carinate between the coxae. Anterior margin of abdominal sterna with a single row of shallow flutings, eroded area of pigidium rather wide, deep. Fore tibia with three larger lateral teeth and very small intervening denticle between first and median tooth; apical spur slender, extending to the half of second tarsal segment; outer side of middle and hind tibia with two transverse rows of short setae, apical spurs slender, slightly curved; first segment of posterior tarsus one-third shorter than the upper tibial spur and a trifle longer than the next two segments combined.

Male. Last abdominal segment narrow with emarginate posterior margin. Metasternum less convex, midline more deep than in female. Aedeagus as in fig. 2.

Female. Last abdominal segment wide with rounded posterior margin. Metasternum more convex, midline less distinctly impressed than in male.

Epipharynx. The bristles of chaetoparia very long, 5 bristles of chaetopodium shorter, somewhat thicker. Epizygon protruding, sclerotized, corypha with two cone-like sensilla.

Variation. Specimens vary in pronotal punctation which is more or less close and more or less distinct.

Remarks. External sexual differences not recognized as yet among the representatives of the genus *Saprosites* Redt., are apparent in width of the last abdominal segment and in the shape of its posterior margin.

I am unable to relate *S. ullrichi* to any described form, although the much needed review of the entire genus may perhaps show it to be one of the widespread, very poorly described species, having been named in the past. It is very close to *S. cheesmani* Paul, described from Papua, but differs in having much more conspicuous punctation of the head and base of pronotum margined.

Saprosites pygmaeus Har. (Figs. 3-4)

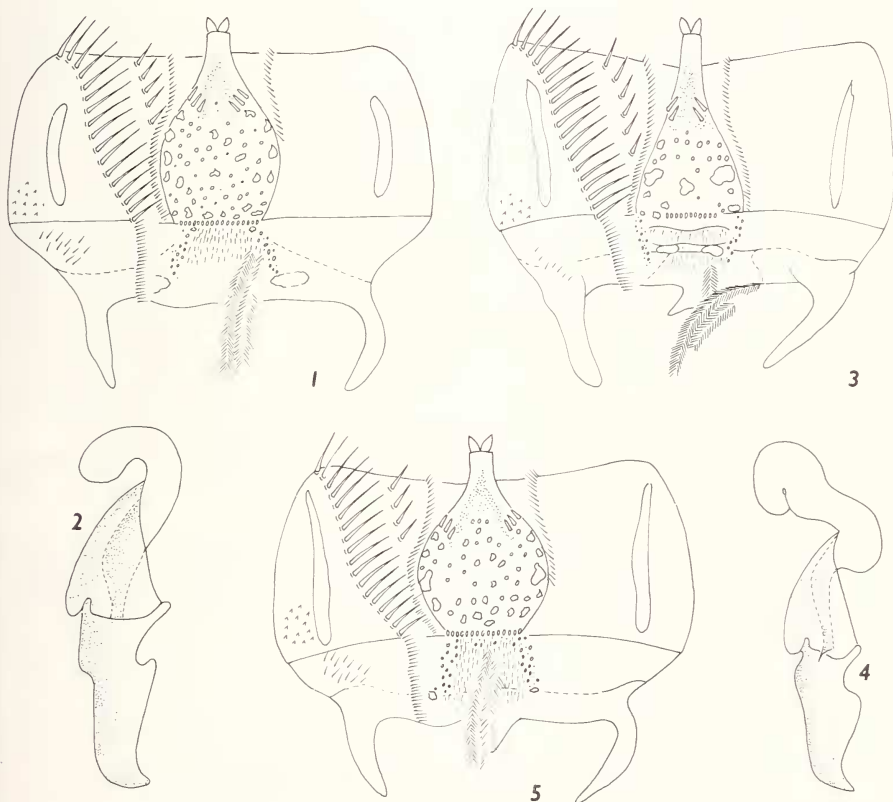
Material: 7 specimens, New Ireland, Namatanai (sea shore), 23.VII.1979, J. D. Bourne (Museum Genève).

Epipharynx. The bristles of chaetoparia very long, 6 bristles of chaetopodium considerably shorter, rather thick. Epizygum protruding, sclerotized, corypha with two cone-like sensilla.

The species originally described from Key Islands (Indonesia, S Moluccas, in Banda Sea), reported from Papua-New Guinea (Astrolabe Bay).

Saprosites dudichi Endr. (Figs. 5, 6)

Material: 4 specimens, New Ireland, Utu, cave Liga (30 m), 30.VII.1979, J. D. Bourne (Museum Genève); Papua-New Guinea, Eastern Highland Prov., One-



FIGS. 1-5.

1-2: *Saprosites ulrichi* n. sp.; 1. epipharynx; 2. aedeagus laterally. 3-4: *S. pygmaeus* Har.; 3. epipharynx; 4. aedeagus laterally. 5: *S. dudichi* Endr., epipharynx.

runka, vicinity of Kainantu, 31.V.1979, W. G. Ullrich (coll. H. J. Bremer); Lae, 4-6.IX.1968, J. Balogh (Museum Budapest).

Epipharynx. The bristles of chaetoparia very long, 4 bristles of chaetopodium shorter, somewhat thicker. Epizygom protruding and sclerotized, corypha with two cone-like sensilla.

The species originally described from Papua (Astrolabe Bay).

Saprosites papuanus n. sp. (Figs. 8-10)

Holotype male: Papua-New Guinea, Wau, Institute of Ecology, 1500 m, 8.XI.1978, L. Deharveng (Museum Genève).

Length 3.2 mm, greatest width of pronotum 1.2 mm, of elytra 0.8 mm. Body shining, oblong, castaneous. Head convex, twice wider than long, clypeal margin broadly rounded each side of shallow, deeply grooved anterior margin, sides slightly arcuate toward small, obtusely rounded genae; surface anteriorly alutaceous, minutely punctate, median and occipital area with fine, evenly distributed punctures. Pronotum wide, convex, subquadrate, foveae absent; anterior angles obtuse, sides faintly arcuate toward truncate, not emarginate posterior angles, sides and posterior angles bordered, base without marginal line, slightly crenulate by fine, distant punctures; anterior of disc very finely punctate, sides with fine, distinct punctures separated by their diameters, the remained part of pronotum with mixed very fine and a trifle larger punctures separated by one or two their diameters. Scutellum very small, shining. Elytra parallel-sided, humeri finely dentate, the punctures of not strongly impressed striae slightly crenating inner margins of the intervals; intervals moderately convex, wider than striae on the disc, nearly the same width as striae on the sides. Mesosternum as convex as metasternum; metasternum finely punctate, midline impressed. Anterior margin of abdominal sterna with a single row of flutings more distinct on the sides of each sternum, eroded area of pigidium rather wide, deep. Fore tibia with three lateral teeth and small intervening denticle between first and median tooth, apical spur slender, extending to the half of second tarsal segment; middle and hind tibia with two transverse rows of short setae, apical spurs slender, slightly curved; first posterior tarsal segment one-third shorter than the upper tibial spur and a trifle shorter than the next three segments combined.

Epipharynx. The bristles of chaetoparia very long, 9 bristles of chaetopodium shorter, somewhat thicker. Epizygom sclerotized, protruding, corypha with two cone-like sensilla.

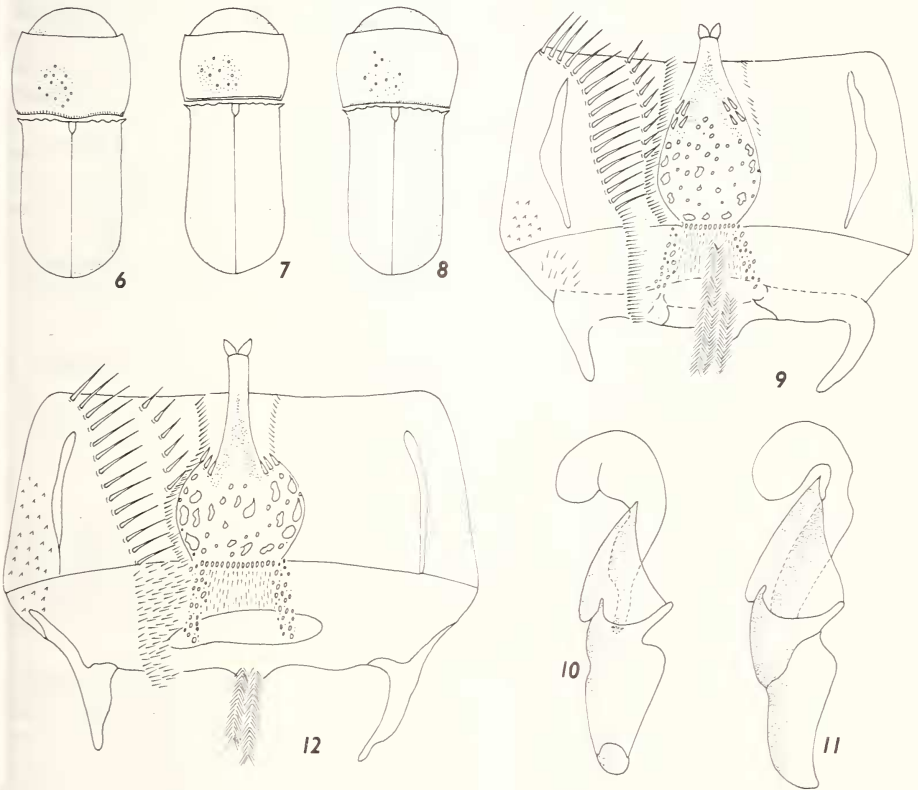
Remarks. *S. papuanus* is superficially very close to *S. dudichi* Endr. and to *S. fodori* Endr. (Fig. 7), but is noticeably different from both in direct comparison. Posterior angles of *S. dudichi* are distinctly emarginate, elytra shorter than in *S. papuanus*, the pronotal punctation deeper and much more closely distributed. Pronotal base of *S. fodori* is distinctly bordered, elytra diverging apically and the pronotal punctation similarly as in *S. dudichi* is noticeably closer.

Saprosites wauensis n. sp. (Figs. 11-12)

Holotype male: Papua-New Guinea, Wau, Mt. Kaindi, 19-24.VIII.1969, J. Balogh (Museum Budapest).

Paratypes (4): the same locality as holotype (Museum Budapest; ISEZ); Wau, Institute of Ecology, 8.XI.1978, L. Deharveng (Museum Genève).

Length 3.5-3.9 mm, greatest width of pronotum 1.2-1.3 mm, of elytra 1.4-1.5 mm. Body shining, oblong oval, basic color black or rufous, in black specimens anterior of head castaneous, legs dark brown. Head convex, twice wider than long, finely reflexed clypeal margin broadly rounded each side of shallow, slightly grooved median emargina-



FIGS. 6-12.

6-8: *Saprosites* sp. body outline; 6. *dudichi* Endr.; 7. *fodori* Endr.; 8. *papuanus* n. sp.; 9-10: *S. papuanus* n. sp.; 9. epipharynx; 10. aedeagus laterally. 11-12: *S. wauensis* n. sp.; 11 — aedeagus laterally; 12 — epipharynx.

tion, sides arcuate toward small, right-angled genae; anterior of head alutaceous, minutely punctate, the punctures of median and occipital area fine, evenly distributed. Pronotum convex, rectangular, foveae absent; anterior angles obtuse, sides straight toward faintly truncate, not emarginate posterior angles; sides, posterior angles and base distinctly margined, crenating punctures absent or very inconspicuous; surface punctures anteriorly contiguous the same size as those of the head, these on the disc mixed fine and larger, irregularly distributed, separated by one to three of their diameters, vanishing toward the sides which are finely, rather uniformly punctate. Scutellum very small, triangular,

alutaceous. Elytra convex, widened behind the middle, humeri distinctly dentate, striae deeply impressed with large punctures crenating inner margins of the intervals; intervals convex, twice wider than striae on the disc, the same width as striae at sides of elytra, surface very minutely punctate. Mesosternum as convex as metasternum, carinate between the coxae. Anterior margin of abdominal sterna with a single row of delicate flutings, eroded area of pigidium rather wide, deep. Fore tibia with three lateral, slightly curved teeth and small intervening denticle between first and median tooth; apical spur slender, extending to the end of second tarsal segment; outer side of middle and hind tibia with two transverse rows of short setae, apical spurs slender, slightly curved; first posterior tarsal segment one-third shorter than the upper tibial spur and nearly equal to following three segments combined.

Male. Last abdominal segment a trifle shorter than in female, metasternum less convex. Aedeagus as in fig. 11.

Female. Last abdominal segment a trifle longer than in male, metasternum more convex.

Epipharynx. The bristles of chaetoparia very long, 6 bristles of chaetopodium shorter, somewhat thicker. Epizygon sclerotized, protruding, corypha with two cone-like sensilla.

Remarks. *S. wauensis* is closely allied to *S. ullrichi* n. sp. and to *S. fodori* Endr., but differs from both by thickset shape of the body, especially of elytra.

***Euparia papuana* Petrov. (Fig. 13)**

Material: 26 specimens, Papua-New Guinea, Lae, 11.XII.1978, L. Deharveng (Museum Genève); Prov. Morobe, vicinity of Humeng, Wampu River, 16.IX.1979, vicinity of Kaiapit, XII.1978, vicinity of Waritajan, VI.1979, Rintebe, V.1979, Prov. Madang, Dumpu, Ramu valley, 500 m, XI.1979, Madang, III, VI.1979, W. G. Ulrich (coll. H. J. Bremer; ISEZ).

Variation. The specimens at hand compared with paratype (Museum Genève) vary from 4.8 mm to 5.5 mm in length and from 2.0 mm to 2.4 mm in width. This species is characterized by a considerable individual variability evident chiefly in the shape and punctuation of pronotum. Some specimens show the disc of pronotum more convex, the punctures closer, nearly rugose on the sides, in young individuals bearing very short, erect setae.

Sexual differences. Male: posterior angles of pronotum truncate and clearly emarginate. Aedeagus as in fig. 13.

Female: posterior angles of pronotum truncate, faintly emarginate or not emarginate.

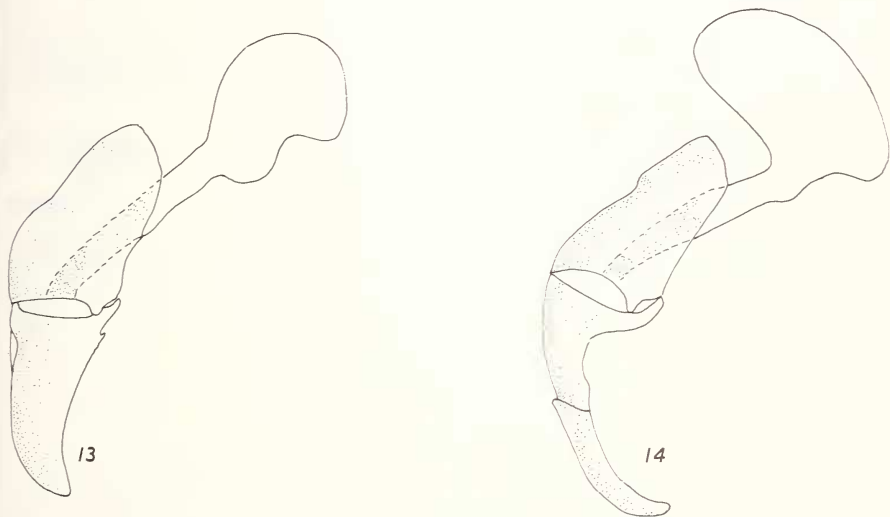
***Euparia wonga* n. sp. (Fig. 14)**

Holotype male: Papua-New Guinea, Wau, XI.1978, L. Deharveng.

Paratype male: the same data as holotype (Museum Genève).

Length 4.0-4.2 mm, greatest width 1.8-1.9 mm. Oblong oval, moderately convex, setaceous, black, anterior of head and legs dark reddish brown. Head strongly convex at middle, steep toward anterior margin, clypeus rounded each side of moderate median emargination, sides nearly straight to broadly rounded, prominent genae; surface

punctures coarse, longitudinal, these of occipital area rounded, bearing short, yellow setae; surface locally masked by argillaceous coating. Pronotum convex, anterior angles prominent, depressed, sides short, subdepressed, arcuate toward broadly truncate, strongly emarginate posterior angles, base delicately margined and setaceous; surface with two concave foveae on the sides, the punctures coarse, close, larger and closer on the sides, bearing yellow, erect setae masked locally by coating. Scutellum oval, shining. Elytra shining, diverging from base to apex, humeri strongly dentate, elytral suture convex; striae narrow on the disc, closely punctate, two lateral striae as wide as intervals



FIGS. 13-14.

Euparia sp. aedeagi laterally; 13. *papuana* Petrov.; 14. *wonga* n. sp.

with large, distant punctures; intervals flat with close, shiny, transverse tubercles bearing yellow erect setae. Metasternum convex, midline strongly impressed, surface shagreened, coarsely punctate and setaceous. Abdominal sterna shagreened, coarsely punctate, posterior margins convex and finely crenate, anterior margins with a row of flutings; 5th sternum shorter than the remained, 6th widest at middle with deep fluting nearly half as long as the sternum. Fore tibia slender, lateral teeth small, apical spur slightly bent downward and curved inward at the tip; middle and hind tibia faintly bent, slender, apical spurs thin; first posterior tarsal segment about two times as long as the upper tibial spur and nearly equal in length to the remaining segments.

Female unknown.

Remarks. *E. wonga* n. sp. is very similar to *E. papuana* Petrov. but these species are easily separated by differences in the shape of head, pronotum and aedeagus. *E. papuana* has denticulate clypeal margin and posterior angles of pronotum not as deeply emarginate as in *E. wonga*.

The features of external morphology of species referred to the genus *Euparia* Lep. et Serv. and *Ataenius* Har. distributed in the Australian Region are not well defined, overlapping among various species of both genera separation of which is difficult and uncertain. The current examination of Eupariini known hitherto from the Western Hemisphere (CHALUMEAU 1981, 1983) reveals a taxonomic disorder in this tribe. It would be desirable to revise Eupariini from the Australian Region on the basis of ordered superspecific classification of Neotropical taxa.

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